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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,067	12/28/2005	Gerd Sutter	GRUE-004	6100

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EXAMINER

HURT, SHARON L

ART UNIT	PAPER NUMBER
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1648

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/532,067	Applicant(s) SUTTER ET AL.	
	Examiner Sharon Hurt	Art Unit 1648	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>December 8, 2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Status of Claims

The amendments to the claims filed September 18, 2006 is acknowledged. Claims 5 and 9-10 are amended. Claims 1-17 are pending and under examination on the merits.

Response to Arguments

Rejections Withdrawn

The rejection of claim 5 and 10 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention because they contained acronyms which are not defined in the specification is **withdrawn** pursuant applicant's amendments.

The rejection of claims 1, 3-4, 6-7 and 10-17 under 35 U.S.C. 102(b) as being anticipated by Yang et al. is **withdrawn** pursuant applicant's arguments. Applicant's arguments, see pages 12-13, have been fully considered and are persuasive.

The rejection of claims 1-4 and 6-17 under 35 U.S.C. 103(a) as being unpatentable over Yang et al. in view of McConkey et al. is **withdrawn**. Applicant's arguments, see pages 13-14, have been fully considered and are persuasive.

Art Unit: 1648

Rejections Maintained

The rejection of claims 1-17 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is **maintained**. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant's arguments that *P. falciparum* proteins are known in the art have been fully considered but they are not persuasive. Applicant also argues "the instant specification describes an adequate number of nucleic acids encoding the recites MSP-1 protein". However, lack of written description in the specification does not allow one of skill in the art to recognize that applicant was in possession of the broad genus encompassing all fragments and muteins of the genus at the time the invention was filed.

New Rejections***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al. (Vaccine, 1997, Vol. 15, No. 12/13, pages 1303-1313) in view of Kumar et al. (Immunology Letters, April 2002, Vol. 81, pages 13-24).

Art Unit: 1648

The claimed invention is described in the previous Office action. The teachings of Yang et al. (hereinafter Yang) are described in the previous Office action. Yang does not teach the recombinant vaccinia virus MSP-1 protein is from the 3D7 or FCB1 strain of *P. falciparum*.

Kumar et al. (hereinafter Kumar) teaches about a DNA plasmid vaccine encoding the merozoite surface protein 1 (MSP-1) from the 3D7 strain of *Plasmodium falciparum* (Pf3D7) (Abstract). Kumar also teaches about the construction of a vaccinia recombinant expressing MSP-1 (page 15, Section 2.2).

It would have been *prima facie* obvious to the person of ordinary skill in the art at the time the invention was made to use the 3D7 strain of Kumar. The person of ordinary skill in the art would have been motivated use the 3D7 strain because a plasmid constructed with the human strain 3D7 would be a good vaccine candidate, and reasonably would have expected success because of the results of Kumar and the teachings of Yang.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rafatro et al. (Biochemical Pharmacology, 2000, Vol. 59, pages 1053-1061) teaches about the 3D7 and FcB1 strains of *Plasmodium falciparum* (Abstract and FIG. 3).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharon Hurt whose telephone number is 571-272-3334. The examiner can normally be reached on M-F 8:00 - 4:30 PM.


Art Unit: 1648

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sharon Hurt

28 December 2006


BRENDA BRUMBACK
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